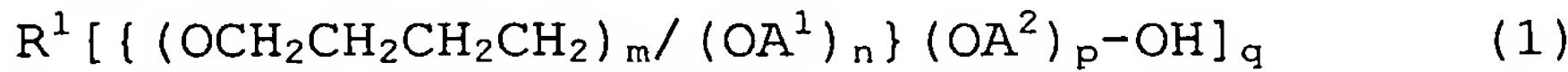


CLAIMS

1. A lubricant for water-based metal working oil containing polyether (E) represented by the following 5 general formula (1) and having an HLB of 6.1 to 16.0 and a weight-average molecular weight of 500 to 10,000



[in the formula, R^1 denotes a residue such that at least one hydroxyl group is removed from a compound with a carbon 10 number of 1 to 24 having 1 to 6 hydroxyl group(s); A^1 denotes an alkylene group with a carbon number of 2 to 4 except a 1,4-butylene group; A^2 denotes an alkylene group with a carbon number of 2 to 4; m denotes an integer of 1 or more having an average of 1 to 120; n and p each denotes 15 an integer of 0, 1 or more such that an average of $(n+p)$ is 1 to 200, and n and p are not simultaneously 0; q denotes an integer of 1 to 6; and $\{ (OCH_2CH_2CH_2CH_2)_m / (OA^1)_n \}$ in a case where n is an integer of 1 or more denotes a random bond].

20 2. The lubricant according to Claim 1,
wherein n or p in the general formula (1) is 0.

3. The lubricant according to Claim 1 or 2,
wherein R^1 in the general formula (1) is a residue 25 such that all hydroxyl groups are removed from dihydric or trihydric alcohol.

4. The lubricant according to any one of Claims 1 to 30 3,
wherein A^2 in the general formula (1) is an ethylene group.

5. The lubricant according to any one of Claims 1 to 35 4,
wherein $m / (m+n+p)$ in the general formula (1) is 0.05

to 0.8.

6. A lubricant composition for water-based metal working oil

5 which comprises the polyether (E) according to any one of Claims 1 to 5 and other additives.

7. The lubricant composition according to Claim 6, wherein other additives are aliphatic carboxylic acid
10 with a carbon number of 8 to 22 and/or a salt thereof (F).

8. The lubricant composition according to Claim 7, wherein (F)/(E) is 0.03 to 5.0 at a weight ratio.

15 9. The lubricant composition according to any one of Claims 6 to 8,

which contains, as other additives, one kind or more selected from the group consisting of an antioxidant, an extreme-pressure additive, a rust preventive and an
20 antifoaming agent.

10. The lubricant composition according to any one of Claims 6 to 9,

which does not contain hydrocarbon oil as other
25 additives.

11. A water-based metal working oil comprising water and the lubricant according to any one of Claims 1 to 5 or the lubricant composition according to any one of Claims 6
30 to 10,

said water-based metal working oil containing polyether (E) of 0.01 to 95 weight % in quantity on a basis of a weight of said metal working oil.

35 12. The water-based metal working oil according to

Claim 11,
which is of solution type or soluble type.

13. The water-based metal working oil according to
5 Claim 11 or 12,
which is employed for working aluminum, aluminum
alloy, iron and/or steel.

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